Cambridge Isotope Laboratories, Inc.
isotope.com

RESEARCH PRODUCTS

MouseExpress® Mouse Tissue

Buy **ONE** tissue: **10% off**
Buy **TWO** tissues: **15% off**
Buy **THREE** tissues: **20% off**

*Special Offer!**

*Valid until 11/15/2014

Female tissue available for most organs. Please inquire.

Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer intact stable isotope-enriched mouse tissue for use in SILAM: **MouseExpress® L-Lysine ($^{13}C_6$, 97%) Mouse Tissue** and **MouseExpress® (^{15}N, 94%) Mouse Tissue**.

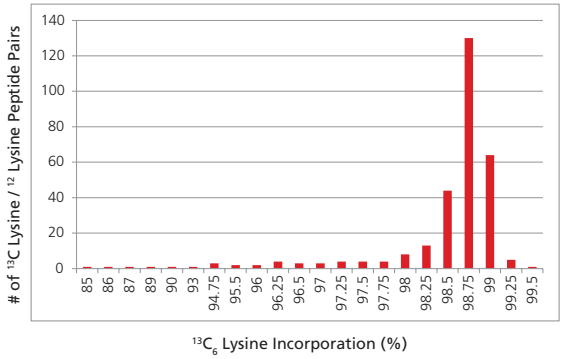
Stable Isotope Labeling in Mammals (SILAM) involves labeling an entire rodent with heavy isotopes for quantitative proteomic tissue analysis. The feed used in SILAM contains "heavy" lysine (i.e. L-Lysine $^{13}C_6$ or other heavy-labeled amino acids) or ^{15}N-enriched Spirulina as the only protein source. In SILAM, the heavy tissues are used as internal standards for quantitative proteomic analysis of basic mammalian physiology and animal models of disease. Labeling an entire proteome with heavy isotopes *in vivo* generates an ideal standard for quantitative proteomics because possible alterations in protein populations arising from subfractionation steps are automatically corrected for as long as the "heavy" and "light" tissues are combined early on in the workflow. The use of prelabeled tissue as a comparative quantitative standard will save the user a considerable amount of time, effort and money compared to feeding a rodent for extended periods of time with an isotope-enriched diet.

MouseExpress® L-Lysine ($^{13}C_6$, 97%) Mouse Tissue

Strain: C57BL6
Form: Intact Tissue
Generation: >F2
Age: Various ages are available; please inquire

Sex: Male or female
Storage: -80° C
Isotope enrichment: $^{13}C_6$ in Lysine >97%

$^{13}C_6$ Lysine Incorporation (%)



Incorporation efficiency of Lysine $^{13}C_6$ into peptides extracted from LysC digested mouse blood as determined with a single LC/MS run, by evaluating the ratios between labeled (Lysine $^{13}C_6$) and unlabeled (Lys0) for all detected peptides utilizing MaxQuant.

MouseExpress® L-Lysine ($^{13}C_6$, 97%) Male Mouse Tissue

Catalog No.	Description	
MT-LYSC6-MAW	Abdominal Adipose (white)	$1,500
MT-LYSC6-MAB	Interscapular Adipose (brown)	$1,500
MT-LYSC6-MBL	Bladder	$1,300
MT-LYSC6-MBR	Breast	$1,300
MT-LYSC6-MB	Brain	$3,900
MT-LYSC6-MC	Cecum	$500
MT-LYSC6-MCO	Colon	$500
MT-LYSC6-MD	Duodenum	$500
MT-LYSC6-MEY	Eye	$1,200
MT-LYSC6-MFB	Femur Bone	$1,200
MT-LYSC6-MH	Heart	$3,200
MT-LYSC6-MIL	Ileum	$500
MT-LYSC6-ME	Inner Ear	$1,300
MT-LYSC6-MI	Intestine	$1,500
MT-LYSC6-MJ	Jejunum	$500
MT-LYSC6-MK	Kidney	$1,500
MT-LYSC6-WML	Liver	$3,100
MT-LYSC6-MLU	Lung	$1,300
MT-LYSC6-MMAM	Mammary	$1,300
MT-LYSC6-MM	Muscle	$1,500
MT-LYSC6-FO	Ovaries (female)	$1,700
MT-LYSC6-MP	Pancreas	$1,500
MT-LYSC6-MPL	Plasma	R/P
MT-LYSC6-MSE	Serum	R/P
MT-LYSC6-MSK	Skin	$850
MT-LYSC6-MSP	Spleen	$1,500
MT-LYSC6-MSC	Spinal Cord	$1,200
MT-LYSC6-MST	Stomach	$1,200
MT-LYSC6-MT	Testis	$1,700
MT-LYSC6-MTB	Tibia Bone	$990
MT-LYSC6-MTH	Thymus	$1,500
MT-LYSC6-FWHOLE	Whole Mouse (female)	R/P

R/P – Request Pricing

Price is subject to tissue availability. Price is for product only and does not include shipping cost or import/export duties.

Please see other side

MouseExpress® (^{15}N, 94%) Mouse Tissue

Strain: C57BL6
Form: Intact Tissue
Generation: F0
Age: ~15 weeks
Sex: Male
Storage: -80° C
Isotope enrichment: ^{15}N, 94%

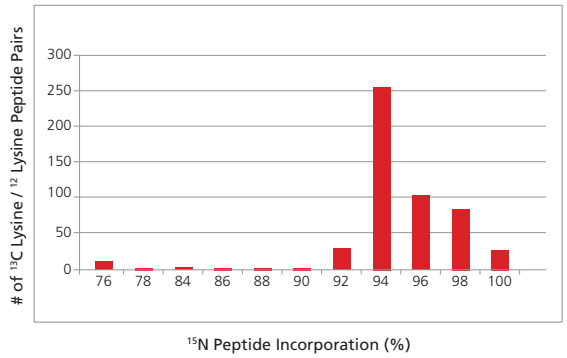
MouseExpress® (^{15}N, 94%) Male Mouse Tissue

Catalog No.	Description	
MT-15N-MB	Brain	$2,700
MT-15N-MK	Kidney	$1,050
MT-15N-ML	Liver	$2,500
MT-15N-MLU	Lung	$1,170
MT-15N-MM	Muscle	$1,290
MT-15N-MSE	Serum	R/P
MT-15N-MSP	Spleen	$1,290
MT-15N-MTA	Tail	R/P
MT-15N-MT	Testis	$1,400

R/P – Request Pricing
Price is subject to tissue availability.

Additional tissues available upon request. Please inquire.

^{13}N Peptide Incorporation (%)



MudPIT analysis performed on MouseExpress® ^{15}N brain tissue (F0 generation, 12 weeks of labeling) using an Orbitrap instrument. Both ^{14}N and ^{15}N peptides were searched, and then each ^{14}N corresponding or identified ^{15}N isotopic distribution was compared to theoretical ^{15}N isotopic distributions to calculate ^{15}N peptide enrichment using Census (http://fields.scripps.edu/census) and IP2 (http://wwwintegrated proteomics.com).

The details of the calculation are in MacCoss, et. al., **2005**. Measurement of the isotopic enrichment of stable isotope-labeled proteins using high-resolution mass spectra of peptides. *Anal Chem, 77*, 7646-53.

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"We have worked with CIL for many years and they have been great collaborators. Our interactions with them have been key to helping us develop quantitative proteomic methods, particularly the SILAM technique to study animal models of disease."

John R. Yates, III, PhD
Ernest W. Hahn Professor
The Scripps Research Institute
Chemical Physiology & Cell Biology

Rayavarapu, S.; Coley, W.; Cakir, E.; Jahnke, V.; Takeda, S.; Aoki, Y.; Gordish-Dressman, H.; Jaiswal, J.K.; Hoffman, E.P.; Brown, K.J.; Hathout, Y.; Nagaraju, K. **2013**. Identification of disease specific pathways using *in vivo* SILAC proteomics in dystrophin deficient mdx mouse. *Mol Cell Proteomics.* Jan 7. [Epub ahead of print]

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